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Raines

[11] 3,815,910

[45] June 11, 1974

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|-----------|---------|---------------------|-----------|
| 986,979 | 3/1965 | Great Britain..... | 273/167 F |
| 12,743 | 7/1901 | Great Britain | 273/80 C |
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| 1,232,651 | 5/1971 | Great Britain | 273/80 C |

- Primary Examiner*—Richard C. Pinkham
Assistant Examiner—Richard J. Apley
Attorney, Agent, or Firm—Willard J. Hodges, Jr.

- [21] Appl. No.: 324,841

- [57] ABSTRACT

- UNITED STATES PATENTS

- This invention pertains to a new design, configuration, and mode of construction for a golf putter. A putter head is constructed from metallic square tubular stocks. A plastic putting surface is constructed in the face of the club and the tubular body is filled with epoxy or injected plastic. The shaft is secured to the center of the rear of the head. The shaft makes a 90° turn, extends parallel to the head, and projects upward at a 10° angle from the normal.

4 Claims, 4 Drawing Figures

- 14,169 6/1898 Great Britain 273/167 C



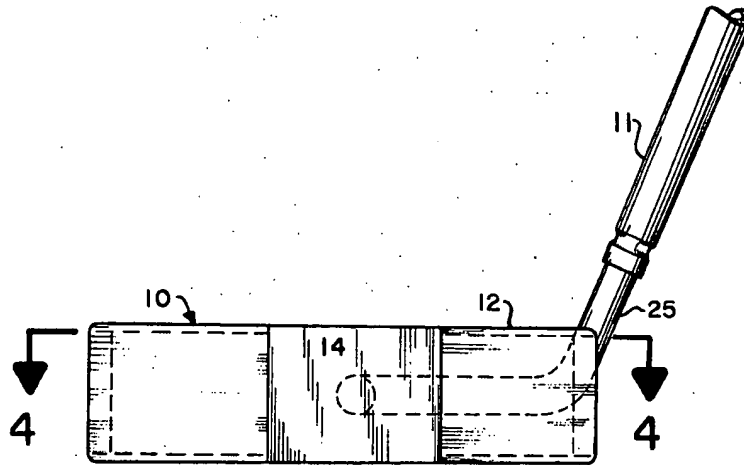


FIG. 1

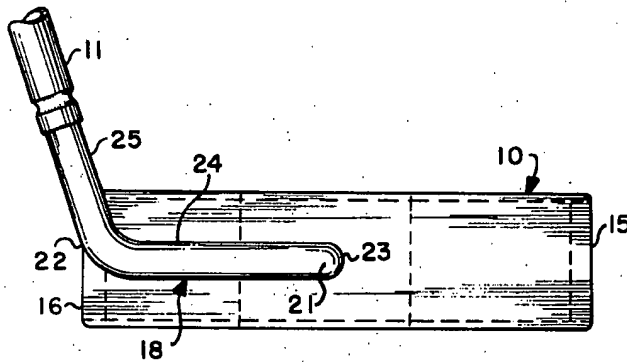


FIG. 2

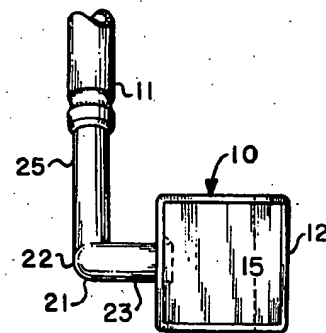


FIG. 3

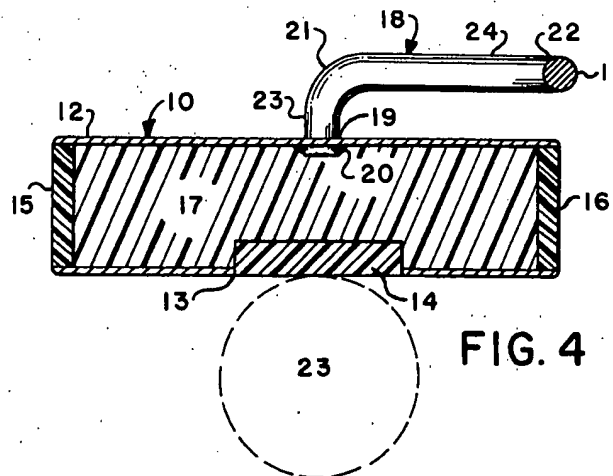


FIG. 4

PLASTIC FILLED GOLF PUTTER WITH DOUBLE GOOSENECK SHAFT ATTACHMENT MEMBER

BACKGROUND OF THE INVENTION

1. Field of the Invention

Undoubtedly the one golf club which has received the most inventive thought is the putter. Numerous designs have been conceived and produced in an effort to accomplish feel and accuracy in putting. Most golfers, professional as well as serious amateurs, have marked likes and dislikes in the selection or preferred design for their putter.

2. Description of Prior Art

Among the various examples of art is U.S. Pat. No. 3,143,349 which employs selected weights in the club head and U.S. Pat. No. 3,387,844 which comprises a hollow club head including a percussion chamber. Various methods of attaching the shaft to the club head have been employed, and the configuration of the neck of the shaft have been varied. Some shafts are secured to the end of the club head as in U.S. Design Pat. No. 159,068 while other shafts are secured to the center of the club head as in U.S. Pat. No. 3,042,405.

SUMMARY OF THE INVENTION

The head of the golf club of this invention may be constructed from 1 inch square metallic tubular stock of 1/8 inch wall thickness. The head is preferably approximately 4 inches long. Into the face of the club head is formed or cut a 1 1/4 inch recess, 1/4 inch deep. The interior of the club head and the recess are filled with nylon or other extruded or injected durable plastics. The double gooseneck shaft is integral with or secured to the club head at the center point of the rear of the head. The first bend of the gooseneck is perpendicular to the rear of the club head after which it makes a right angle turn and projects parallel to the rear of the club head; the second gooseneck bends and projects upward at an angle of 10° from the normal. This deviation of 10° or more is required by rules governing the game. The upward projection of the shaft is tapered tubular hollow spring steel of conventional construction with a putter grip secured to the end of the shaft opposite the club head.

One of the objects was to design a putter with improved feel and accuracy.

Another object was to improve the balance of the club head during the stroke and upon striking the ball.

Other objects and advantages will be apparent to those skilled in the art of golf and putter construction from a study of the attached views and the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an elevation view of the face of the club head.

FIG. 2 is an elevation view of the rear of the club head.

FIG. 3 is an elevation end view of the club head.

FIG. 4 is a sectional view of the club head taken substantially on line 4—4 of FIG. 1 looking in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENT

For a detailed description of the preferred embodiment, your attention is invited to the attached several views wherein identical reference characters will be utilized to refer to identical or equivalent components throughout the several views and in the following detailed description.

Putter 10 of this invention in outward appearance has many similarities to golf clubs currently in use. The shaft 11 is constructed of tapered hollow spring steel widely used in the industry. Shaft 11 has secured to it at its upper extremity a flat-sided grip or handle (not shown) also currently widely used in the industry. The club head of the putter 10 of this invention on its construction employs a 1 inch square section of metallic tubular stock 4 inches long. The casing 12 can be constructed from brass, aluminum, stainless steel or any of a wide variety of square, tubular metallic stocks. Machined in the face of the casing 12 is a putting surface recess 13. This surface 13 is 1 1/4 inches long and projects into the casing 12 1/4 inch. A plastic or nylon block may be embedded in recess 13 to form a putting surface 14. In one of the initial embodiments, casing 12 was enclosed by a first end plug 15 and a second end plug 16 after which the interior void in the casing 12 was filled with epoxy securing the putting surface 14 first end plug 15 and second end plug 16 in one composite structure. It is visualized, however, that plastic filler 17 might be injected into the cavity in casing 12 resulting in putting surface 14 and the first and second end plugs 15 and 16 being an integral part of the plastic filler 17. This plastic filler might be an injection molding of any of the wide variety of plastics used for such purpose. Some of the urethanes or polychlorin plastics may be employed.

Another novel feature of the putter 10 construction of this device is in the configuration of double gooseneck shaft 18. In the preferred embodiment, shaft 18 was constructed from cold rolled steel. The shaft hole 19 was machined in exact center of casing 12 directly opposite from putting surface recess 13. The double gooseneck shaft 18 was secured in this hole by shaft weld 20. It is visualized that other methods of construction might be employed without departing from the spirit and scope of this invention. For example, casing 12 and double gooseneck shaft 14 might well be formed or cast as one integral structure from an aluminum alloy, brass, or any metal capable of investment casting or extrusion molding in the desired configuration. An important feature of this invention is the configuration of the double gooseneck shaft 18. This shaft includes an attaching leg 23 projects outward from the rear surface of casing 12 in a direction perpendicular to or normal to the rear surface of casing 12 at which point the first gooseneck 21 is formed in shaft 18 at right angles to the attaching leg 23 initial arm of the first gooseneck 21. The shaft projects diagonally in an intermediate leg 24 spaced from and parallel to the rear surface of casing 12 to a point directly opposite the end of the casing 12 at which point the second gooseneck 22 is formed in shaft 18. The bend or configuration at this point is 10° from the normal; that is, the interior angle would be 100° and the exterior angle would be 260°. The bend of this second gooseneck 22 is such that shaft leg 25 projects upward from casing 12 in a plane

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parallel to the rear face of casing 12. The configuration of projections of all of the legs of the double gooseneck are on planes parallel to the plane of the surfaces of casing 12; that is, the first gooseneck adjacent shaft hole 19 is constructed on a plane parallel to the first end plug 15 and second end plug 16 as well as the bottom surface and top surface of casing 12. It is also exactly perpendicular to the face of putting surface 14 and projects to the rear of the casing 12. The diagonal projection between the first gooseneck 21 and the second gooseneck 22 is likewise spaced from and parallel to putting surface and the rear surface of casing 12 and also parallel with the top of casing 12 and the sole or heel of casing 12. In order to fully comply with prevailing rules of golf pertaining to the construction and configuration of putters the second gooseneck is constructed at an angle of at least 10° from normal.

OPERATION OF THE INVENTION

In utilization of the device of this invention, a conventional putting stance is assumed. The configuration of the putting surface 14 in conjunction with first gooseneck 21 materially assists the golfer in proper alignment of the putter 10. This characteristic in combination with the usual swing or putting stroke of the golfer results in the imparting of a slightly overspin to the putt. Improved feel and accuracy are accomplished by the precise angular structures and configuration of the overall combination. Your inventor, as well as friends, has experienced improved accuracy and feel which is deemed to result from the combination of the particular double gooseneck configuration of the shaft in combination with the plastic filler 17 in casing 12 in combination with putting surface 14 which strikes the ball 23.

Having described in detail the construction of the preferred embodiment and suggested alternative methods of construction as well as describing improved operation, what is desired to be claimed is all modifications or configurations of the device not departing from the equivalents of the invention shown and described as claimed in the appended claims.

I claim:

1. A golf putter comprising:

- a. a substantially square hollow tubular casing having a face, a rear surface, a top surface, a first end, and

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- a second end, said surfaces surrounding a body cavity,
 - b. a plastic filler filling the body cavity,
 - c. a putting surface constructed in the face of said tubular casing, said putting surface contacting said plastic filler,
 - d. a shaft secured to said hollow tubular casing,
 - e. a double gooseneck member constructed in the said shaft adjacent said hollow tubular casing,
 - f. said double gooseneck member comprising:
 - 1. an attaching leg secured to said hollow tubular casing, said attaching leg projecting perpendicular from the rear surface of said hollow tubular casing,
 - 2. a first gooseneck formed in said shaft adjacent said attaching leg, said first gooseneck terminating in,
 - 3. an intermediate leg projecting on a plane parallel to the face of said tubular casing, said intermediate leg terminating in,
 - 4. a second gooseneck formed in said shaft, said second gooseneck terminating in,
 - 5. a shaft leg which projects at an angle substantially 10° from normal to said intermediate leg, secured to said shaft leg is,
 - g. an elongated shaft including a hand grip secured to the shaft of said double gooseneck, and
 - h. the attaching leg of said double gooseneck is secured at the center of the rear surface of said hollow tubular casing at a point opposite the center of said putting surface.
2. The invention of claim 1 wherein the plastic filler filling the body cavity in the hollow tubular casing is nylon.
3. The invention of claim 1 wherein:
- a. the putting surface comprises a nylon block indented in the face of said hollow tubular casing, and
 - b. the plastic filler filling the body cavity is epoxy.
4. The invention of claim 3 further comprising:
- a. a nylon first end plug mounted in the first end of said hollow tubular casing, and
 - b. a nylon second end plug mounted in the second end of said hollow tubular casing.

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